

Seasonal Work for Beekeepers

Increasing the Number of Hives

IN some parts of New Zealand, chiefly in southern districts, the bees come through the winter greatly reduced in numbers. Bees which have passed through a hard winter are vigorous enough for a time, but they quickly die off in the spring after the first cycle of brood has been raised. The secret of successful spring apiary management, therefore, is to get a force of young bees to care for the queen and brood as soon as possible, and this can be done only by supplying the bees with dry, comfortable hives and sufficient stores, as indicated in last month's notes. After the bees have had an opportunity to carry on brood-rearing the next visit to the apiary should be for a close examination of each hive.

Queenless Colonies

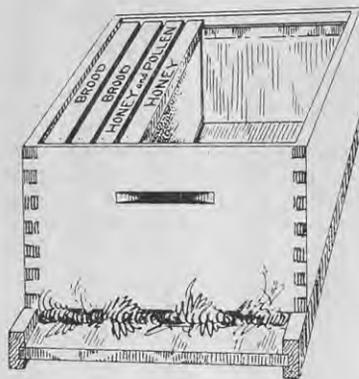
Where colonies are not successfully re-queened by the beekeeper before wintering them down, or where a queen has died for any reason late in the autumn, the colony becomes hopelessly queenless. A number of worker bees then attempt to perform the duties of a queen, and they eventually start to lay eggs. Although worker bees are females, they are capable of laying only unfertilised eggs, from which drones develop. These drones are raised in worker cells, and are always much smaller than normal drones raised in natural drone cells used by fertilised queens.

The presence of bullet-shaped cappings over cells scattered through the brood nest and small drones in the hive is sufficient indication that a colony is queenless, and also that laying worker bees are present. Although it is possible to re-queen colonies reduced to this condition, they are very slow in building up, and it is best to unite them immediately with hives which have laying queens.

Making Increase

Many small beekeepers will now be considering how to increase the number of their hives without purchasing new colonies or depending on swarming. Before attempting to make increase by artificial methods the beekeeper must thoroughly understand the fundamentals of colony requirements and the habits of the bees.

The queen must have the protection of large numbers of worker bees and sufficient comb room (worker cells) in which to lay her eggs during the breeding season. Each colony must have



Position of combs.

sufficient worker bees, including a large portion of nurse bees, to maintain the necessary warmth for brood-rearing and to feed the young larvae. A colony containing only old field bees is not capable of raising brood satisfactorily, and can make but slow progress.

In addition to honey, bees require a good supply of pollen and water. Pollen is a source of proteins and fats in the food prepared for feeding the larvae in the brood nest, and without pollen or a suitable substitute no brood or young bees can be developed. Fresh water should be provided where there is no readily accessible natural source. The elimination of long flights for water enables the bees to return to the hives before they become chilled on cold days in the spring, and is at all times a distinct saving of bee energy.

Dividing Hives

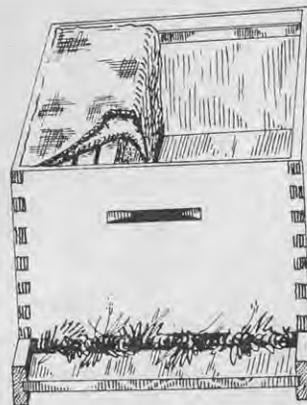
In districts where the honey season is fairly long and there is a relatively late main honey flow, the brood stores and bees of a strong colony may be divided into two parts without serious loss of honey crop, provided the division is made early in the season and the queenless portion is given a young laying queen immediately. The division should be made six to eight weeks before the main honey flow begins, and care must be taken to get the largest portion of nurse bees into the section moved away to a new stand. The entrance should be closed with a wad of green grass for at least two days; otherwise this new colony would be weakened considerably by the return of the majority of field bees to the

original hive location. Great care must be taken to prevent robbing of the weakened colonies and to see that they are well supplied with suitable stores.

In localities where the main honey flow begins early and is of short duration, there is usually insufficient time for the bees to build up and store a normal surplus when divided in this manner. They will, however, build up into good strong colonies and store a little surplus, provided the season is favourable.

Rapid Increase

Rapid increase by dividing each colony into three or four at one time can be accomplished only at the expense of the honey crop for that season. Where



Prepared nucleus colony.

the beekeeper has good Italian stocks, brood-rearing should be encouraged by feeding a little sugar syrup regularly three or four times a week to the colonies to be divided until each hive contains at least eight combs of brood and has an abundance of nurse bees.

The time to divide is when the hives are in that condition before the main honey flow begins and when nectar is available in the fields. A simple plan is to remove the queens and leave the hives for ten days, during which time the bees will have raised queen cells on nearly all of the brood combs. Queens removed in this way may be used to make further increase by introducing them to the queenless portion of divided hives as explained earlier.

On the tenth day after the removal of the queens a sufficient number of hives should be prepared and placed in position about the apiary ready to take the increase. Divide the brood combs